LOAD LINE 3
DIGITAL WEIGHT INDICATOR

USER MANUAL

TUNAYLAR

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1. GENERAL FEATURES

Load Line-3 is a digital weight indicator using the latest Sigma-Delta A/D technology and providing fast and accurate weighing. It can be used in a very diversified set of weighing applications owing to its technological design which is appropriate to national and international standards.

Load line -3 can be used even in very hard environmental conditions because of its stainless steel construction, practical and easy usage features. Beside to its weighing abilities, load line -3 also provides additional functions which will be very useful for you.

Easy to Use
Load Line 3 provides easy and quick programming and usage opportunities with the user-friendly and block structure menu.

High speed and accuracy
100 times ADC conversion speed per second and 24 bit 16,000,000 internal counting value.

Weighing range selection
Single and multi range weighing selection function on demand.

Anti-Wibration Filter

Programmable digital and sudden load filter levels.

Self Calibration
Electronic calibration without requiring any load for industrial applications.

Control Inputs / Outputs
Free programmable optional 4 I/O input-output card. Optoisolated 5 V DC (PNPlogic) input, TTL, 1 A/24 V DC or 0.5 A / 125 V AC relay output option.

Analog Output
0-20 mA / 4-20 mA or 0-10 V analog output option allows communication for automation systems like PLC , and other devices.

Alphanumeric Code Input
Selectable product type or customer code memory and Coding in the mobile phone logic in alphanumeric character input.

Tare - Numeric Tare Memory
20 pcs numeric tara memory which can be defined by the user beside the manual tare.

Alibi Memory
Optional, alibi memory allows storing 105.000 records including weighing number, gross , tare and net weight information.

Reporting
A detailed report according to the codes or total weighing report.

Printer Connection / Labeling
Trough RS232 data output connection Load Line 3 can print ticket, stick label and barcode by connecting thermal, ribbon, dot matrix and barcode type printers. Ticket- label desing, Turkish-English Language option

Additional Functions
Simple piece counting, peak hold, dynamic weighing, automatic filling and tolerance control mode operation options.

2. TECHNICAL SPECIFICATIONS

Accuray Class	III / IIII
Aprroved Division	7.500 d Single and Multi Interval
Certificates	2009/23 EC, OIML R76, CE
Display	7 Digit, 14 mm. VFD Display
Status Indicatons	Stand still, Zero, Numeric Tara, Net, Pcs and Weight Range symbols
Keypad	Membran type, 20 functional alpha numeric touch sense keys
A/D Converter / Speed	24 Bit Delta-Sigma - 10 ms. - 6.25-100 Hz.
Signal Range	0,1mvV/V- 3mV/V
Input Voltage	0.33 µV/e
Internal Resulation/ Division	1/16.000.000 Internal Conversions / Display up to 80.000
Linearity & Temp Co-efficient	% 0.0015 FS; ≤ 2 ppm / ºC
Loadcell Excitation	5 V DC
Loadcell Connection	Min. 1 unit 43,75 ohm, / Max. 8 units 350 ohm, 25 units 1100 ohm
Serial Communication	RS232
Power Supply	12 V DC / 5 W (max.)
Operation Temperature	-10°C....+ 40°C / %85 RH
Housing	Aluminium Cast (Standart) / Stainless Steel (Option)
Protection Class	IP 54 / IP 65

Model:	**LL3 CTA**	**LL3 CTC**	**LL3 POA**	**LL3 TOA**
Size & Weight	227x98x170mm - 2 kg	215x154x158mm - 1,5 kg	250x92x191 mm - 2 kg	227x92x170 mm - 1,7 kg
Sizes with Package & Weight	330x210x120mm - 2,8 kg	330x210x120mm - 2,3 kg	330x210x120mm - 2,8 kg	330X210X120mm - 2,5 kg

OPTIONS:

Communication	1 x RS232, 1 x RS422 / 485, MODBUS RTU, Ethernet, TCP / IP
Wireless Communication	RF
Analog Output	0-10 V / 0-20mA / 4-20 mA
Digital Input/Output	Optoizole 4 inputs (5 VDC-PNP Logic-) / 4 TTL, 1 A/24 VDC or 0.5 A/125 VAC relay outputs
Alibi Memory	2MB. (105.000 Records)

3. CERTIFICATES

3.1. Directives and Standards

2009/23/EC Non-automatic Weighing Instrument Directive (NAWI)	EN 45501 OIML R76
2004/108/EC Electromagnetic Compatibility Directive (EMC)	EN 55022:1998+A2 Class B
	EN 61000-3-2:2000
	EN 61000-3-3:1995+A1
	EN 45501:1992+AC:1993
	EN 61000-4-2:1995+A1+A2
	EN 61000-4-3:2002+A1
	EN 61000-4-4:1995+A1+A2
	EN 61000-4-11:1994+A1
2006/95/AT Low Voltage Directive (LVD)	

3.2. Certificates

EC Type-Approval Certificate	No: DK 0199.63 Notified Body: Delta Danish Electronics, light & Acoustics
EMC Test Certificates	No: 708 Notified Body: Delta Danish Electronics Light & Acoustics
OIML Certificate of Comformity	No: R76/1992-DK3-11.02 Notified Body: The Danish Accreditation and Metrology Fund

4.1. SUBJECTS TO BE CONSIDERED DURING SETUP, OPERATING AND MAINTENANCE

Mounting:

The instrument is suitable for table or panel mounting (see drawings for details of different types). Please observe the Required environmental conditions as given in technical Specifications.

Dismantling

When removing the housing, covers or other protecting parts, live parts or terminals will be exposed. Therefore setting - up the instrument must be performed only by trained personnel who are aware of risks.

Earthing:

The instrument has to be earthed according to latest safety requlations which are valid locally.

Electrostatically Sensitive Components:

This instrument contains electrostatically sensitive components. Therefore repair of electrostatically sensitive assemblies or Components must be carried out only by qualified personnel at workstations protected against electrostatic discharge.

Other Instructions:

* Check network voltage and especially protective earthing line before operating the terminal.

* Do not turn on the indicator before load cell cable connector is connected.

* Do not Disconnect load cell or serial port connectors while the indicator is operating.

* In order to operate the indicator properly, it must be connected to a socket which have earthing.

* Prevent device from direct sunshine. Keep it away from heat sources (like sto ve).

* Do not make hard push to the buttons on the keypad, do not use pencil, screwdriver or other sharp tools.

* You can use little moist, soft and hairless gland in order to clean the device.

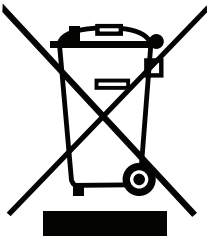
* Prevent the device from water leaps. If water or any other liguid is spilled on the device, disconnect all of electricity connections and dry it. After being sure that the device is dried, you can start to operate it again.

* Check the contents of the consignment for completeness and note whether any damage has occurred during transport. If the contents are incomplete, or if there is damage, immediately inform us in order to facilitate the repair or replacement of the instrument.

Parts provided with your device are as follows:

- Adaptor
- MIC 6 Connector (for load cell)
- Serial Communication Cable
- User Manual

4.2. Notes Concerning Product End of Life



The crossed-out wheeled bin on the product means that at the product end of life, it must be taken to separate collection or to the reseller when a new equivalent type of equipment is purchased. The adequate differentiated refuse collection in having the product recycled helps to avoid possible negative effects on the environment and health and supports the recycling of the materials of which the equipment is made. The unlawful disposal of the product by the user will entail fines foreseen by the current regulations.

5. GENERAL VIEW

5.1. Front Panel

5.2. Buttons

PRESET TARE

PT Button is used for preset tare entry during weighing provided that:

- Weight display is in standstill condition
- Indicator is not in set up mode, or in failure mode

If it is pushed one more time, device will go back to gross display mode.

Additionally, this button is used for strolling upward direction between programming and calibration menus.

TARE

Tare button is used to keep displayed weight vaule as tare. After pushing it, net value will be seen on the display If :

- Weight is positive
- Weight display is in standstill condition
- Indicator is not in set up mode, or in failure mode

If it is pushed one more time, device will go back to gross display mode.

Additionally, It is also used to move cursor right during alphanumerical or numerical data entries.

FUNCTION

F Button is used to enter functions and set-up menus.

Also, it is used for strolling downward direction between programming and calibration menus.

SET TO ZERO

Zero button is used to make displayed weight value zero. In order to set weight to zero conditions given below must be satisfied:

- Weight display is in standstill condition
- Tare is reset
- Gross weight is in previously selected manual zero range
- Indicator is not in set up mode, or in failure mode

It is also used to move cursor left during alphanumerical or numerical data entries.

CODE

Code button is used to define new codes or to display previously entered codes. Enter code number (beetwen 01-99) you want to define . After that, enter code by using buttons on keypad.

TOTAL

Total Button is used to reach reports for the records saved Into alibi memory (up to 105.000 records).
After pressing this button, "REPORTS?" message will be seen, you can select one of 1,2,3,4 buttons in order to complete reporting (See reporting section for details)

PRINT

Print button is used to print weighing result or save it into alibi memory or computer.(This button is disabled if continuous data transmit mode is active, please see serial communication section).

Pressing to this button causes to print provided that:

- Indicator output manual output has correspondingly be activated
- The weight display is in standstill condition
- Weight vaule is greater than min printable amount selected before
- Indicator is not in set up mode, or in failure mode

GROSS TO NET

G-N button is used to display gross and net values during weighing. Owing to this button, gross vaule can be seen without loosing tare and preset tare values. After five seconds, display will return back to net mode.

ENTER

Enter button is used to enter programming and calibration menus and to make selection among alternatives. It is also used as "Yes" button for question messages.

ESC

Esc button is used to go back to upper menus from sub menus. It can be used to exit without changing parameters. It is also used as cancel button for question messages.

NUMERIC KEYS

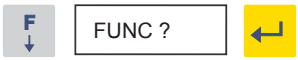
10 numerical buttons are used to enter numerical or alphanumerical data entry as in mobile phones. They activate respective functions, if they are used after F button. (For more information please see additional functions section).

5.3. Status Signals:

	STANDSTILL	Standstill signal shows that the load on the platform does not move. It lights up as soon as "no motion" is anymore detected within the initially set range and time (If the difference between consecutive weight values is smaller than the value selected in P2.7, then this signal will light after the time selected at P2.8 is elapsed).
→0←	**ZERO**	Zero signal shows that there is no load on the scale. It lights as soon as the actual gross weight is equal to zero. If it doesn't lights when there is no weight on the scale it means there is the amount of deviation at zero. If desired, this deviation can be reset via the "set to zero" button.
PT	**PRESET TARE**	Preset (fixed) tare signal will start to light after pushing PT key and it will light during preset tare entry by using numerical buttons.
NET	**NET**	Net signal will light during net weight value is seen on display (lights up as soon as having tared by pressing tare or preset tare button).
Pcs	**PIECES**	Pieces counting signal will light if pices counting function is activated.
H	**PEAK HOLD**	First digit of the display starting from left will show "H" signal while peak hold weight vaule is being displayed.
	RANGE 1	Indicate 1. weighing range. It lights when weight value is smaller than Max1
	RANGE 2	Indicate 2. weighing range. It lights when weight value is bigger than Max1

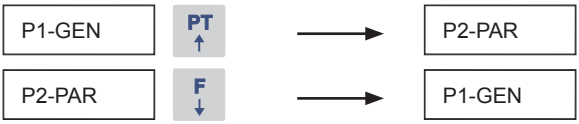
6. CONFIGURATION AND CALIBRATION MENUS :

- In order to enter P1- General, P2- Parameters, P3 - Configuration and P4- Calibr ation menus, calibration jumper must be closed.
- Press F button to enter configuration and calibration menus, when FUNC ? message is appeared, press Enter button.

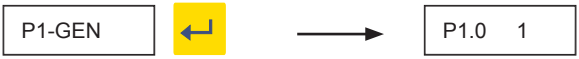


- After PASS ? message is displayed, write password and press Enter.

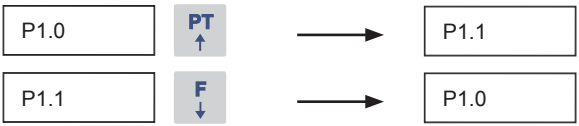
- You can use PT and F buttons in order to stroll between main menus up, or down.



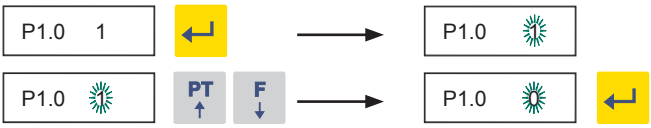
- Use Enter button in order to enter sub menus of any of the main menus.



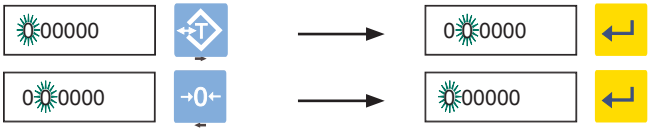
- Again you can use PT and F buttons in order to stroll between sub menus.



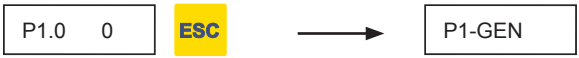
- Press Enter button in order to start changing a parameter. Change it by using PT / F buttons and save it by pressing Enter button.



- During data entry menus, T and PT buttons are used to move cursor one step right or left.



- After changes are confirmed by enter button, use Esc button to go back to main menus from sub menus.



- In order to exit from programming and calibration menus, go to " End " menu and press Enter button, During SAVE ? message, press Enter button in order to save differences or use Esc button to exit without saving.

Calibration Sequence Summary:

1. Close calibration jumper J1 (for P1, P2, P3, P4)
2. Go through steps P1…P8 and select END open calibration jumper J1
3. Close and seal the weight indicator housing as described in this manual.

P1	GENERAL
P1.0	PURPOSE OF USE
P1.1	SINGLE INTERVAL/ MULTI RANGE/ MULTI INTERVAL
P1.2	DEFAULT VALUES

P2	PARAMETERS
P2.0	AUTO ZERO TRACKING
P2.1	AUTO ZERO TIME
P2.2	MANUAL ZERO
P2.3	INITIAL ZERO
P2.4	LOAD CELL GAIN RATE
P2.5	ADC INTERVAL FILTER
P2.6	DIGITAL FILTER
P2.7	STANDSTILL DETECT INT
P2.8	STANDSTILL TIME
P2.9	TARE ENABLE

P3	CONFIGURATION
P3.0	CAPACITY 1
P3.1	DIVISION 1
P3.2	DECIMAL POINT PLACE 1
P3.3	CAPACITY 2
P3.4	DIVISION 2
P3.5	DECIMAL POINT PLACE 2
P3.6	WEIGHING UNIT
P3.7	DECIMAL POINT TYPE
P3.8	OVERLOAD

P4	CALIBRATION
P4.0	WEIGHT CALIBRATION
P4.1	SELF CALIBRATION
P4.2	GRAVITY PARAMETERS

P5	SERIAL COMM.
P5.0	ALIBI MEMORY
P5.1	BAUD RATE FOR COM1
P5.2	BAUD RATE FOR COM2
P5.3	CONTINUOUS DATA TRANSMIT
P5.4	MANUAL DATA TRANSMIT
P5.5	SLAVE PORT
P5.6	ADDRESS
P5.7	MODBUS

P6	INPUT / OUTPUT
P6.0	OUTPUT OPERATING TYPE
P6.1	OUTPUT ASSIGNING
P6.2	OUTPUT SET WEIGHTS
P6.3	INPUT OPERATING TYPE

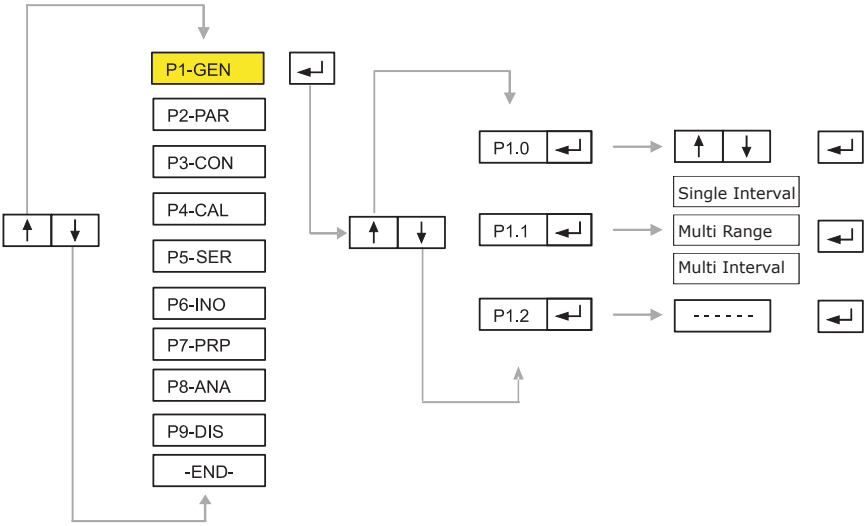
P7	PERIPHERALS
P7.0	MIN. LOAD FOR PRINTER
P7.1	TICKET FORMAT
P7.2	TICKET FIELDS
P7.3	TICKET LANGUAGE
P7.4	PAPER TYPE

P8	ANALOG OUT
P8.0	ENABLE / DISABLE
P8.1	RANGE
P8.2	TYPE
P8.3	MODE
P8.4	CALIBRATION

P9	DISPLAY
P9.0	INTERNAL COUNT DISPLAY
P9.1	CALIBRATION VALUE DISPLAY

-END-

6.1. P1 - General :



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P1.0	Purpose of Use	1- Non Approved 2- Approved	2	If non approved mode is selected, indicator adjustments can be changed without any restrictions. In approved mode, the data input will only be accepted if they are convenient to EN45501 standard.
P1.1	Single Interval Multi Range Multi Interval	0 1 2	0	You can select the operation type of the indicator from this menu. Select 0 for single Interval, 1 for Multi Range and 2 for Multi Interval.
P1.2	Default Values *	------		This option is used to return all of indicators parameters back to their factory default values.

*** Factory default values are as follows:**

P1 - GENERAL

P1.0 - 2
P1.1 - 0
P1.2 - -

P2 - PARAMETERS

P2.0 - 0
P2.1 - 4
P2.2 - 1
P2.3 - 0
P2.4 - 64
P2.5 - 3
P2.6 - 0
P2.7 - 1
P2.8 - 2
P2.9 - 0

P3 - CONFIGURATION

P3.0 - -
P3.1 - 1
P3.2 - 0
P3.3 - -
P3.4 - 1
P3.5 - 0
P3.6 - 1
P3.7 - 1
P3.8 - 2

P4 - CALIBRATION

P4.0 - -
P4.1 - -
P4.2 - -

P5 - SERIAL COMM.

P5.0 - 1
P5.1 - 9600
P5.2 - 9600
P5.3 - 0
P5.4 - 0
P5.5 - 1
P5.6 - 001
P5.7 - 0

P6 - INPUT / OUTPUT

P6.0 - 0
P6.1 - -
P6.2 - -
P6.3 - 0
P6.4 - -

P7 - PERIPHERALS

P7.0 - 0
P7.1 - -
P7.2 - -
P7.3 - 0
P7.4 - 0

P8 - ANALOG OUT

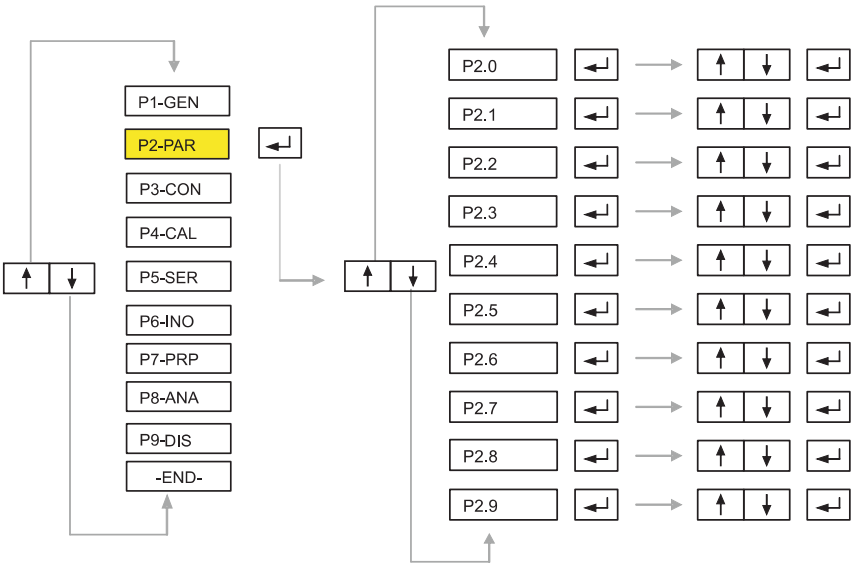
P8.0 - 0
P8.1 - -
P8.2 - 0
P8.3 - 0
P8.4 - -

P9 - DISPLAY

P9.0 - -
P9.1 - -

P10-END

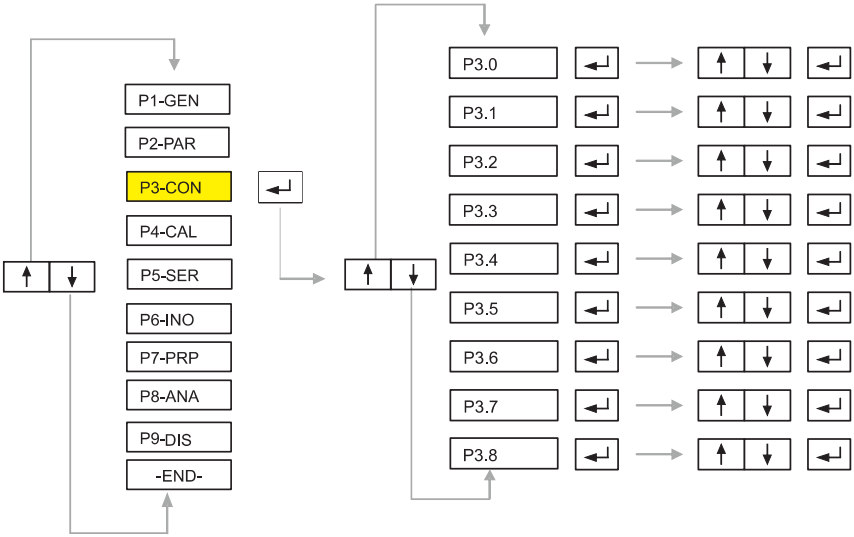
6.2. P2 - Parameters:



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P2.0	Auto Zero Tracking	0- Disable 1- 0.25e 2- 0.5e 3- 0.75e 4- 1e 5- 1.25e 6- 1.5e 7- 1.75e 8- 2e	0	Weight vaules smaller than the selected value will be set automatically to zero.
P2.1	Auto Zero Waiting Time	0 - 0 sec. 1 - 0,5 sec. 2 - 1 sec. 3 - 1,5 sec. 4 - 2 sec.	4	Time which will be elapsed before auto zero is activated.
P2.2	Manual Zero	1 - %2 2 - %20 3 - Full Capacity	1	Select maximum load range that can be manually zeroed by pushing zero button.

P2.3	Initial Zero	0 - Disable 1 - %1 2 - %5 3 - %10 4 - %20	0	Select range which will be zeroed during start-up.
P2.4	Load Cell Gain Rate	1 - x1 2 - x2 4 - x4 8 - x8 16 - x16 32 - x32 64 - x64	64	Select gain rate of mV signal coming from load cells. Select 64 for 1 mV/V load cells, Select 64 or 32 for 2mV/V load cells, Select 64, 32 or 16 for others. 1, 2, 4 and 8 are dedicated for special applications
P2.5	ADC Internal Filter	0 - 100 sps. 1 - 50 sps. 2 - 25 sps. 3 - 12.5 sps. 4 - 6.25 sps.	3	Select filter level against sudden impacts.
P2.6	Digital Filter	0 - iptal 1 - last 2 sps. 2 - last 4 sps. 3 - last 8 sps. 4 - last 16 sps. 5 - last 32 sps.	0	Select filter level against external factors and noises. The average of measurements are calculated based on selected values.
P2.7	Standstill Detection Interval	1 - 1e 2 - 2e 3 - 3e 4 - 4e 5 - 5e	1	If the difference between consecutive weight values is smaller than this value, standstill signal will light after the time period selected at P2.8 is elapsed.
P2.8	Standstill Waiting Time	0 - 0 sec. 1 - 0,5 sec 2 - 1 sec 3 - 1,5 sec 4 - 2 sec	2	Select time period will be elapsed before standstill signal lights (if the consecutive weight values are smaller than P2.7).
P2.9	Tare Request	0 Dara Enable 1 Dara Disable	0	Tare button can be enabled o r disabled.

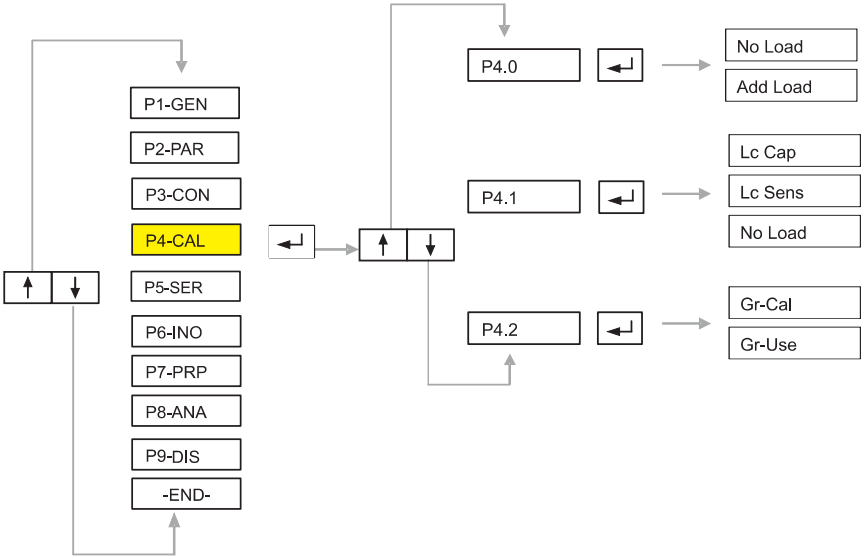
6.3. P3 - Configuration:



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P3.0	Capacity 1	0000000		Enter maximum capacity of the first weighing range (If single interval is selected at menu P4.1, this will be the Maximum Capacity of the scale)
P3.1	Division Interval 1 (Verification Scale Interval)	1 - 1 2 - 2 3 - 5 4 - 10 5 - 20 6 - 50 7 - 100 8 - 200 9 - 500	1	Scale's division interval (verification scale interval.) for weighing range 1. If P1.0 (purpose of use) is selected as approved, number of divisions can not exceed 3000. For non-approved applications you can select up to 50,000 divisions.
P3.2	Decimal Point Place 1	0 - no point 1 - xxxxx.x 2 - xxxx.xx 3 - xxx.xxx 4 - xx.xxxx	0	This option is to select place of decimal point for weighing range 1.
P3.3	Capacity 2	0000000		Enter maximum capacity of the second weighing range

P3.4	Division Interval 2 (Verification Scale Interval)	1 - 1 2 - 2 3 - 5 4 - 10 5 - 20 6 - 50 7 - 100 8 - 200 9 - 500	1	Scales division interval (verification scale interval.) For weighing range 2. If P1.0 (purpose of use) is selected as approved, in case of number of divisions bigger than 3000, the indicator will give an error. If "purpose of use" is selected non approved, the division interval can be selected any value
P3.5	Decimal Point Place 1	0 - no point 1 - xxxxx.x 2 - xxxx.xx 3 - xxx.xxx 4 - xx.xxxx	0	This option is to select place of decimal point for weighing range 2.
P3.6	Unit	1 - kg 2 - lb	1	Select weighing unit which will be displayed and printed on the ticket.
P3.7	Decimal Sign Type	1 - point 2 - comma	1	Select sign type (if decimal vaules are used).
P3.8	Overload	0 - 0 e 1 - 1 e 2 - 9 e 3 - %2	2	Select overload value which can be displayed after full scale capacity. It is selected as "2" for approved applications.

6.4. P4 - Calibration:

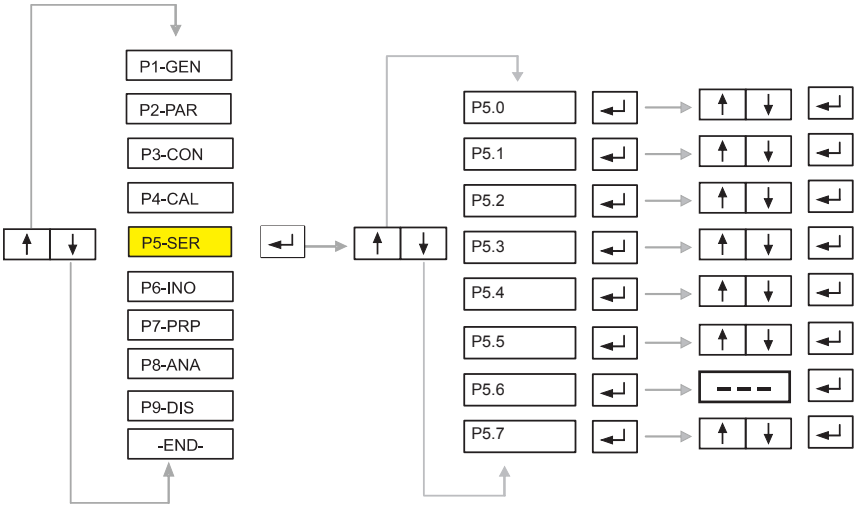


SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P4.0	Calibration With Weight	-------		Note: Maximum capacity and division interval values must be set before starting calibration process. After No Load message appears, make sure that scales platform is empty and press Enter button. Device will show "BUSY" message. "Add Load" message will appear. Put calibration weight on scales platform (min 10 % of full scale, preferably close to maximum capacity) and press Enter button. Then, write this calibration weight value via keypad and press Enter button. Device will display " BUSY " message again. After calibration is completed, main menu will be seen on display. After calibration with weight process is implemented, gravity acceleration values will be zeroed.

P4.1	Self Calibration	-------		This method is used to calibrate the device without calibrated weigh ts. You must enter number of load cells (Lc No), capacity of load cells (Lc Cap), mi llivolt signal (Lc Sens) and to let the device sense the dead load of the scale (No Load). Finally press Enter button, device will show "BUSY" message. Note: Self calibration can be used only for not legal for trade applications
P4.2	Gravity Accelera-tion	-------		Gravity acceleration parameters make it possible to compensate the weight difference between the place in which the instrument is calibrated (GR-CAL) and the place in which the instrument will be used (GR-USE), due to differ-ent gravity acceleration. Gravity acceleration values must be between 9,770000 and 9,840000. Enter these two parameters by using keypad (starting from left) and press enter button. After that, the weight calibration is automatically corrected. Gravity values at some places are as follows:

İstanbul	9.803	m/s^2
Ankara	9.798	m/s^2
İzmir	9.800	m/s^2
Adana	9.798	m/s^2
Amsterdam	9.813	m/s^2
Athens	9.800	m/s^2
Auckland NZ	9.799	m/s^2
Bangkok	9.783	m/s^2
Birmingham	9.813	m/s^2
Brussels	9.811	m/s^2
Buenos Aires	9.797	m/s^2
Calcutta	9.788	m/s^2
Chicaqo	9.803	m/s^2
Copenhaqen	9.815	m/s^2
Djakarta	9.781	m/s^2
Frankfurt	9.810	m/s^2
Glasgow	9.816	m/s^2
Havana	9.788	m/s^2
Helsinki	9.819	m/s^2
Kuwait	9.793	m/s^2
Lisbon	9.801	m/s^2
London (Greenwich)	9.812	m/s^2
Los Angeles	9.796	m/s^2
Madrid	9.800	m/s^2

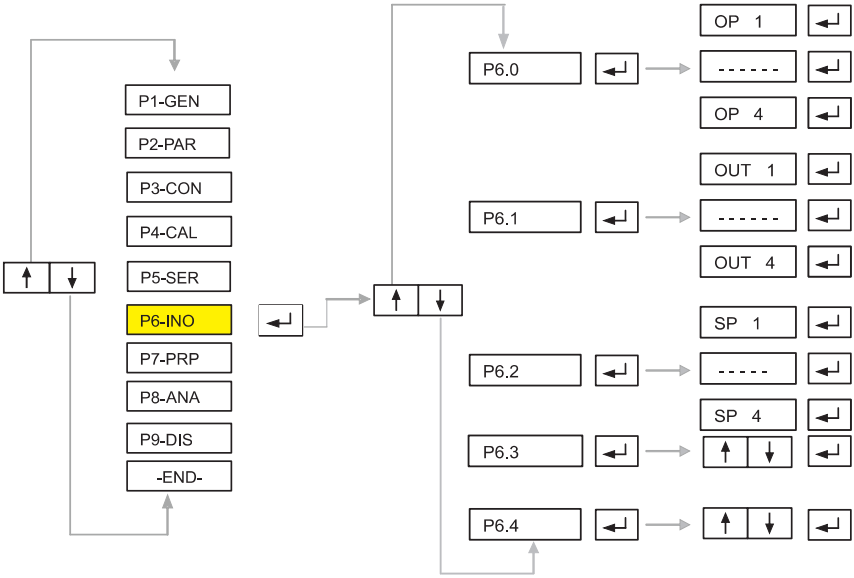
6.5. P5-Serial Communication:



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P5.0	Alibi Memory	0 Disable 1 Enable	1	Alibi memory can be enabled or disabled. Capacity of alibi memory is 105.000 records. When this capacity is exceeded, device will not send serial data until records in alibi memory is deleted.
P5.1	Port 1 Baud Rate	300 600 1200 2400 4800 9600 19200 38400	9600	Select baud rate of communication Ports 1
P5.2	Port 2 Baud Rate	300 600 1200 2400 4800 9600 19200 38400	9600	Select baud rate of communication Ports 2

P5.3	Ports for Continuous Data Transmit	0 Disable 1 Com 1 2 Com 2 3 Com 3 4 Com 1+2 5 Com 1+3 6 Com 2+3 7 Com 1+2+3	0	Select port names for continuously transmitting data (data protocol is given in later sections).
P5.4	Ports for Manual Data Transmit	0 Disable 1 Com 1 2 Com 2 3 Com 1+2	0	Select port names for manually transmitting data (data protocol is given in later sections). Alibi memory reports can be taken through this parts.
P5.5	Slave Port	0 Disable 1 Com 1 2 Com 2 3 Com 3 4 Com 1+2 5 Com 1+3 6 Com 2+3 7 Com 1+2+3	1	Device can be used as slave or master. Select port names which will be used as slave ports.
P5.6	Address	(...)	001	Max. of 32. indicators can be connected through RS 485. Enter device's address information here. If this value is left as zero then the slave port will not work properly.
P5.7	MODBUS protocol	0 Disable 1 Com 1 2 Com 2 3 Com 3 4 Com 1 + Com2 5 Com 1 + Com3 6 Com 2 + Com3 7 Com 1 + Com2 + Com 3	0	Select port number which will communicate with MODBUS protocol

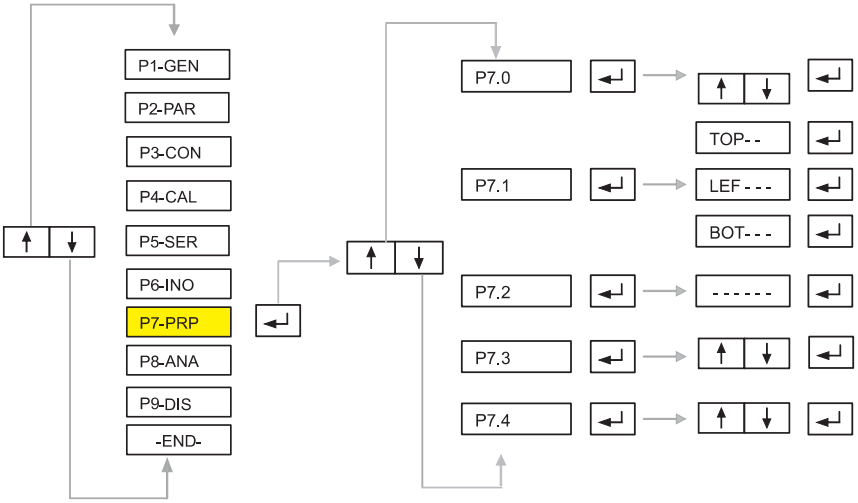
6.6. P6 - Inputs / Outputs:



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P6.0	Output Operating Type	0- Disable 1- Net Values 2- Brut Values 3- Inputs	0	You can select operating type of each of outputs If 0 (disable) is selected, relevant output will be disabled. If 1 (net) is selected, respective output will be closed when net weight value is greater than set point weight (entered at P6.2). If 2 (brut) is selected, this time brut values will be compared with set point weights. If 3 (inputs) is selected, output will work with respect to inputs, meaning that if one of the inputs is active, then respective output will be active (you can assign different inputs to each of outputs as shown in P6.1).

P6.1	Output Assign	-------		You can assign different inputs to each of outputs. First of all select output number and press enter button. Then write respective inputs you want to assign by using the following formula: Input1 x 1 + Input2 x 2 + Input3 x 4 + Input4 x 8. Press Enter button to go next one. You dont have to enter all of 4 outputs, you can exit at any time by using Esc button. Example: if output 1 is assigned to inputs 1 and 3, select output 1 (Out 1) and press enter button. Then write the result of following formula: 1x1 + 0x2 + 1x4 + 0x8 = 06
P6.2	Output Set Point Weights	-------		You can define 4 different set point weights. Enter set weight values by using numerical buttons and then press Enter button to go next one. You dont have to enter all of 4 set values, you can exit at any time by using Esc button. Example: if displayed weight value (brut or net) is smaller than set point 1, output 1 will be open till it exceeds set point 1. As so on as weight value is greater than or equal to set point 1, output 1 is closed.
P6.3	Input Operating Type	0 - Disable 1 - Standard 2 - External Buttons	0	You can select operating type of the set point inputs If 0 (disable) is selected, inputs will be disabled. If 1 (standard) is selected, inputs will be enabled. If 3(external buttons) is selected, 1st input will be used as tare button, 2nd input will be used as zero button and 3rd input will be used as print button.
P6.4	Application Type	0- Filling 1- Level Measuring		If 0 is selected , outputs will not be set while weight is returning back to zero un til zero is displayed. If 1 is selected, outputs will be set as soon as weight is smaller than related set point value

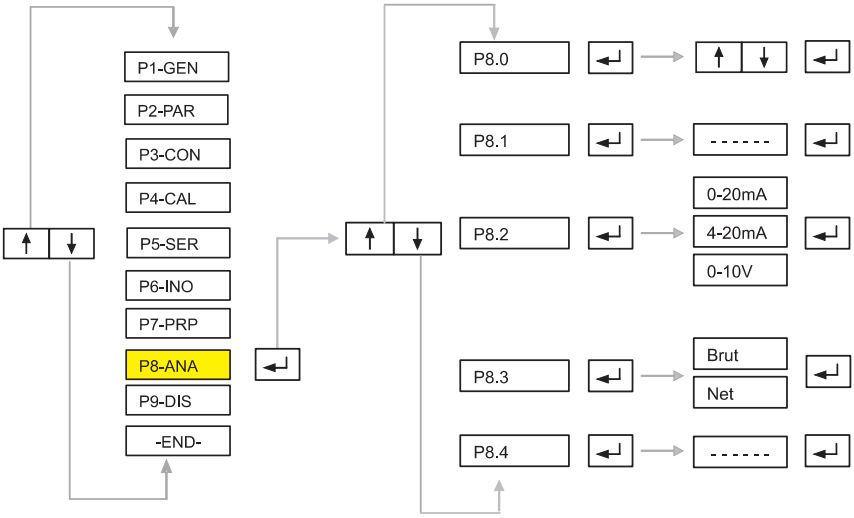
6.7. P7 - Peripheral Equipments:



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P7.0	Minimum Load for Printer	0 - 0 1 - 20 e 2 - 50 e	0	This value shows minimum weight value at which pinter outputs can be taken
P7.1	Ticket Format	-------		Enter number of blank rows from top (Top), number of blank characters from left (left) and blank rows at the end (Bottom). Note: Each of above values must be between 1 to 255.
P7.2	Ticket Fields	-------		Fields on the ticket can be defined by using the following formula: Ticket no x 1 + Firm Name x 2 + Date-Time x 4 + Code x 8 + Weight x 16 + Barcode x 32. You must put 1 for the fields you want to include to the ticket and put 0 for others. Then calculate above formula and enter it to P7.2

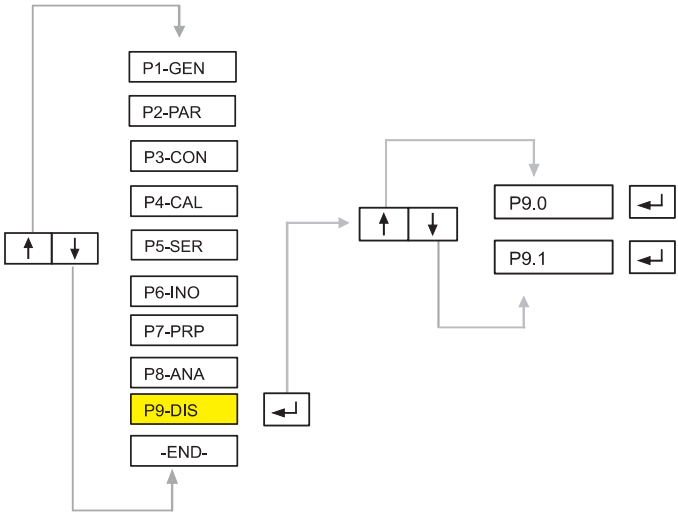
				Example: If you want only ticket no and weight fields on the ticket, then result of the formula will be equal to: 1x1 + 0x2 + 0x4 + 0x8 + 1x16 + 0x32 = 17. You must enter 17
P7.3	Ticket Language	0 - Turkish 1 - English	0	Select language which will be used to explain fields on ticket.
P7.4	Ticket Paper Type	0 - Standard 1 - Sticker	0	Kağıt tipini seçiniz.

6.8. P8 - Analog Out:



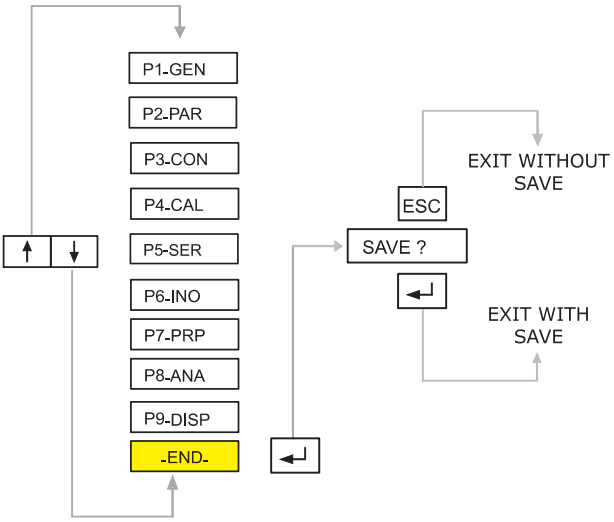
SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P8.0	Disable / Enable	0 1	0	You can enable or disable Analog Out. If Analog Out is enabled it works continously within the range given in P8.1
P8.1	Range	---	-	Select weight range in which analog out will work.Analog out will not be active if the current weight value is not in this range. (Min. and Max. Weight values)
P8.2	Type	0 1 2	0	Select one of three analog out operating types. (0-20mA,4-20mA,0-10V)
P8.3	Mode	0 1	0	Select work mode as Brut(0) or Net(1).
P8.4	Calibration	---	-	This part is used to calibrate Analog Output. First enter zero value and then maximum value. Calibration will provide more accurate analog output value.

6.9. P9 - Display:



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
P9.0	Internal Count Display	-----		You can change display type from weight display to internal count display by pressing Enter button at P9.0. Esc button can be used to exit.
P9.1	Calibration Value Display	-----		Calibration value shows number of internal counts per one verification scale interval (i.e. slope of calibration line).

6.10. P10 - End:



SYMBOL	NAME	ALTERNATIVES	DEF.	EXPLANATION
-END-	End (or Exit)			In order to exit from programming and calibration menus, select End ? and press Enter button. Then Save ? message will appear, you can save changes permanently by pushing Enter button.

7. FUNCTIONS:

Press first F ↓ and then desired numeric button for all of these parameters.

CODE		Code Entries
F ↓	1 -.?	Date
F ↓	2 ABC	Hour (Time)
F ↓	3 DEF	Preset Tare Recording
F ↓	4 GHI	Preset Tare Calling
F ↓	5 JKL	Firm Name Entry
F ↓	6 MNO	Piece Counting
F ↓	7 PQRS	x10 Viewing
F ↓	8 TUV	Peak Hold

CODE	Code Entries	Enter code number you want to define and press Enter button. "Enter" message will appear, press enter button and write code data for the by using keypad then again press Enter button in order to confirm. You can enter letters and other alphanumerical caharacters by pushing more times to buttons (like in mobile phones). You can use tare button to go right and zero button to go left. Each code must be at most 7 characters long. Repeat this procedure more times to enter more codes. If you do not want to save codes press Esc button again. The latest code which you enter will be the active code and will be saved into alibi memory.

F 1	Date	DATE ? message will appear. Press enter button to see and change date (date format is: dd mm yy)
F 2	Time	HOUR ? message will appear. Press enter button to see and change time (time format is: hh mm)
F 3	Preset Tare Recording	TARE 1 message will appear. Use PT and F buttons to reach tare number which you want to enter and then press Enter button. Then, write preset tare value by using keypad. After that, SAVE ? message will appear. Use Enter button to save it into non-volatile memory.
F 4	Preset Tare Calling	TARE 1 message will appear. Use PT and F buttons to reach tare number which you want to select and then press Enter button. Preset tare will be active and net value will be seen on the display. You can exit and return back to gross display by TARE 1 message will appear. Use PT and F buttons to reach tare number which you want to select and then press Enter button. Preset tare will beactive and net value will be seen on the display. You can exit and return back to gross display by pushing PT button.
F 5	Firm Name Entry	FIR 1 message will appear. Press Enter button and write alphanumerical Firm name. You can define 4 different firm names whose each of them can have m a ximum of 7 characters. These fields will be used in printing (if firm name field is selected in ticket fields), first two of them will be combined to form 1st row and other two will form 2nd row.
F 6	Piece Counting	First of all put a few of items you want to count on the scale and select this function. COUNTIN? message will appear. Press Enter button and write number of pieces on the scale, then press enter button again . Number of pieces will be seen on display and pcs signal will light. Now you can put all of items you want to count. Use Esc button in order to exit from this function.
F 7	x10 Viewing	Ent 10? message will appear. If you press Enter button verification scale interval will be divided by 10 and device will be 10 times more sensitive. X10 viewing will last 5 seconds.
F 8	Peak Hold	Hold ? message will appear, press Enter button in order to use this function. Enter maximum flow value of the material and press Enter button. If weight vaule is suddenly reduced more than this value device will catch peak point and will display it. First digit starting from left will show H letter (meaning hold). Use Esc button in order to exit.

8. ALIBI MEMORY AND REPORTING:

Detailed Report Based On Active Code

Weighing Totals Report Based On Codes

All Records Report

Delete Records in Alibi Memory

Σ 1	Detailed Weighing Report Based On Active Code	DETAIL? message will be seen, you can print weighing records for active code by pushing enter button. You can exit by pushing Esc button. (You have to select code number for which you want to get detailed report. To do that press code button and enter code number)
Σ 2	Weighing Totals Based On Codes	TOTAL ? message will appear. You can print weighing totals for all of the codes you defined before by pushing Enter button. If you want to exit without printing, use Esc button.
Σ 3	All Records	ALL message will appear. You can print all of the records in the alibi memory by pushing Enter button. If you want to exit without printing, use Esc button.
Σ 4	Deleting Weighing Records	DELETE ? message will appear. If you press Enter button all of weighing records in the alibi memory will be printed and deleted. Serial number (ticket number) will also be zeroed. You must clean alibi memory if maximum capacity is reached, otherwise device will not send data to serial port. You can exit without deleting records by pushing Esc button.

Standard Report Examples:

010104 10:18

DETAILED RAPOR

CODE: 22 10mm SAC

S.NO	BRUT	DARA	NET
000001	13000kg	2000kg	11OOOkg
000002	15000kg	5000kg	1OOOOkg

.....

010104 10:20

ALL RECORDS

CODE	S.NO	BRUT	DARA	NET
10mm SAC	000001	13000kg	2000kg	11OOOkg
NPI260	000002	15000kg	5000kg	1OOOOkg
NPI160	000003	17000kg		

.....

010104 10:22

TOTAL REPORT

CODE	BRUT	DARA	NET
NPI260	33000kg	9000kg	24000kg
NPI160	55000kg	7500kg	47500kg

.....

9. SERIAL COMMUNICATION PROTOCOL:

9.1. Continuous Data Transmit:

Each package has 21 bytes and starts with Chr(2) and ends up with Chr(13) . Serial data baud rate is adjustable between 300, 600, 1200, 2400, 4800, 9600, 19200, 38400. Data length is 8 bits and there is no parity . Data will be sent only after standstill condition is reached. Order of bytes in each package is as follows:

SB	A	B	C	SP	WEIGHT 1	SP	WEIGHT 2	CH	CK	ST

SB: Start Byte (1 Byte)
Chr (2)

A: Status Word (1 Byte)

A.0: Always 1
A.1: 1 for Net
A.2: 1 for Preset Tare
A.3: 1 for Zero
A.4: Not used
A.5: Always 1
A.6: 1 for Negative
A.7: Not used

B: Status Word 2 (1 Byte)

B.0: Always 1
B.1: 1 for manual print
B.2: Always 0
B.3: Always 0
B.4: Always 1
B.5: Always 1
B.6: Always 0
B.7: Always 0

C: Status Word 3 (1 Byte)

C=0: If there is no decimal point
C=1: If there is 1 character after point
C=2: If there is 2 character after point
C=3: If there is 3 character after point
C=4: If there is 4 character after point

SP: Space (1 Byte)

WEIGHT 1: Displayed Weight Value (6 Byte)

B6	B5	B4	B2	B1	B0
MSB					LSB

WEIGHT 2: Tare Weight (6 Byte)

B6	B5	B4	B2	B1	B0
MSB					LSB

CH: Character (1 Byte)
Chr (3)

CK: Checksum (1 Byte)
ASCII totals of bytes between SB and CH (with respect to Mod 256)

ST: Stop Byte (1 Byte)
Chr(13)

9.2. Manual Data Transmit:

Standard Data Transmit Shape 1 (Gross Weight):

Firm Name:

D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	CH

D14	D13	D12	D11	D1O	D9	D8	D7	D6	D5	D4	D3	D2	D1	CH

Ticket No:

N	0	:	SP	SP	SP	SP	SP	D6	D5	D4	D3	D2	D1	CH

Date - Time:

D6	D5	/	D4	D3	/	D2	D1	SP	SP	SP	D4	D3	:	D2	D1	CH

Code:

C	0	D	E	:	SP	SP	D7	D6	D5	D4	D3	D2	D1	CH

Weight:

W	E	I	G	H	T	:	SP	D6	D5	D4	D3	D2	D1	SP	D2	D1	CH

Standard Data Transmit Shape 2 (Net Weight):

Firm Name:

D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	CH

D14	D13	D12	D11	D1O	D9	D8	D7	D6	D5	D4	D3	D2	D1	CH

Ticket No:

N	0	:	SP	SP	SP	SP	SP	D6	D5	D4	D3	D2	D1	CH

Date Time:

D6	D5	/	D4	D3	/	D2	D1	SP	SP	SP	D4	D3	:	D2	D1	CH

Code:

C	0	D	E	:	SP	SP	D7	D6	D5	D4	D3	D2	D1	CH

Gross Weight:

B	R	U	T	:	SP	SP	SP	D6	D5	D4	D3	D2	D1	SP	D2	D1	CH

Tare Weight:

T	A	R	E	:	SP	SP	SP	D6	D5	D4	D3	D2	D1	SP	D2	D1	CH

Net Weight:

N	E	T	:	SP	SP	SP	SP	D6	D5	D4	D3	D2	D1	SP	D2	D1	CH

SP: Space D6, D5, D4, D3, D2, D1: Data
CH: chr(13)

Standard Ticket Examples:

XYZ COMPANY
0212 886 39 00
NO: 000250
01/01/2004 16:15

CODE: 22 NPI160
BRUT: 00250.5 kg

Standard Transmit Shape 1

XYZ COMPANY
0212 886 39 00
NO: 000250
01/01/2004 16:15

CODE: 22 NPI160
BRUT: 00250.5 kg
TARE: 00100.0 kg
NET: 00350.5 kg

Standard Transmit Shape 2

Not: You can modify or change ticket format by using parameters at P7-PRPH menu.

Serial Data Receive:

It is possible to use serial port as full duplex. You can use serial port to implement some key functions like zero, tare and print. To do that, it is enough to send just one byte to the device. Detailed information is given below:

Zero:

When ascii code (90) of Z (first letter of Zero) is sent to device, it will automatically zero displayed weight value.

Tare:

When ascii code (84) of T (first letter of Tare) is sent to device, it will automatically keep displayed weight value as tare and net value will be displayed. If you send same value one more time, device will return back to gross display.

Print:

When ascii code (80) of P (first letter of Print) is sent to device, it will send data to printer

9.3. Master - Slave Communication:

If the ports are configured in slave mode two way and full duplex communication is possible. To do that, first of all each weight indicator must be addressed. In order to take data from Slave ports the following characters must be send to the indicator.

SB	+	Address	+	Status Bytes	+	ST

SB : Chr(2)

Address : Chr(1)

Status Bytes : Chr(68) + Chr(78) + Chr(71)

ST : Chr(13)

As soon as the indicator take these bytes it will send data to master device via the ports which are dedicated as slave. This communication can be done through RS 232 or RS 422/485. It is possible to connect up to 32 indicators. Data structure is as follows :

SB	+	Address	+	Record No	+	Date	+	Time	+	Weight	+	CK	+	ST

SB : Start Byte

Address : 1 Byte (Address Info)

Record No :

D6	D5	D4	D3	D2	D1

Date :

D6	D5	/	D4	D3	/	D2	D1

Time :

D4	D3	:	D2	D1

Weight :

D6	D5	D4	D3	D2	D1

CK : Checksum

ST : Stop Byte

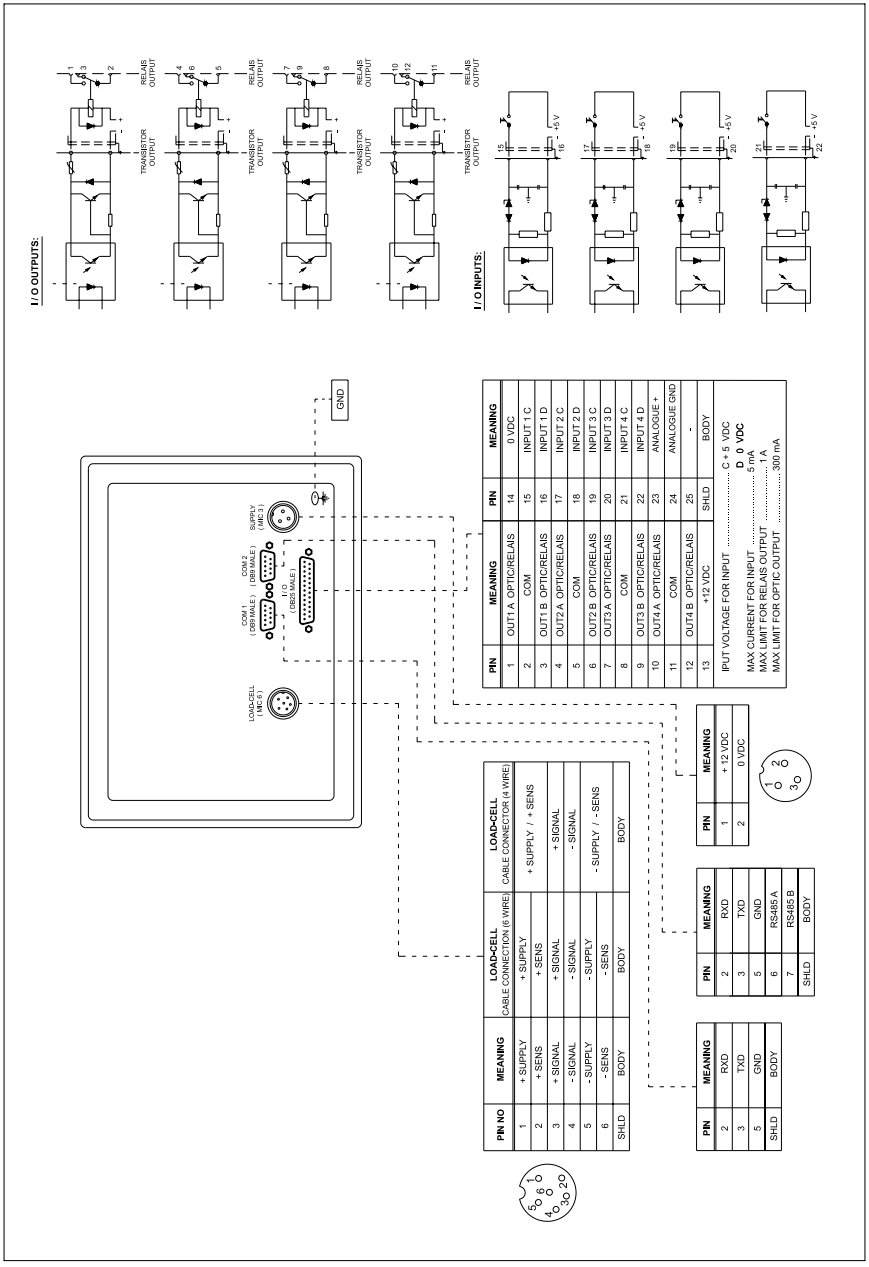
10. ERROR MESSAGES:

Error 1	ADC Conversion Error	Restart the device and call our firm if error message appears again.
Error 2	Signal Failure	Signals are oppositely connected. Correct it.
Error 3	Weak Signal	Check calibration parameters (especially P2.4 load cell gain rate must be selected as x64) and steel construction of the scale.
Error 4	Division number is more than 3000	Check maximum capacity and verification scale intervals.
Error 5	Initialization Error	Restart device. Be sure that load is still while the device is opening.
Error 6	Calibration Weight Error	Calibration Weight must be greater than or equal to 10% of maximum capacity.
Error 7	Parameter Error	Check all parameters.
Error 8	Incorrect Calibration Password	Check your calibration password and then try again.
Error 10	Calibration Jumper Does not Exist	Attach calibration jumper. C alibration jumper must be attached in order to enter some of programming and calibration parameters.
Error 11	Date-Time Error	Check date and time parameters.

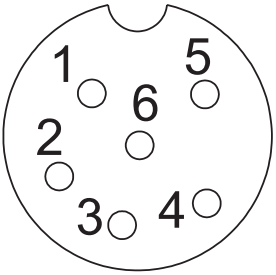
Error 12	Serial Port Selection Error	Ports selected for continuous and manual data transmit must not be the same.
Error 14	No Load Cell	There is no mV signal coming to the device, check load cell connection.

Not: : If you meet with one of error messages given above, please implement relevant instructions or call one of our authorized services.

11.CABLE CONNECTIONS



11.1 . Load Cell Connection:



The load cell cable must not be channelled with other cables (i.e. outputs connected to remote switches or power supply wires), but must follow its own route.

Any cable extensions must be carefully shielded, respecting the colour codes and using the same type of wire as that supplied by the manufacturer. The extension connections must be soldered or connected through support terminal blocks or the joint block supplied separately.

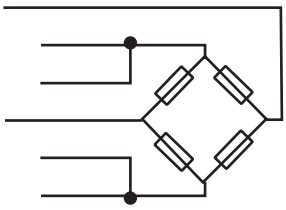
The load cell wire must not have more conductors than those effectively used (4 or 6). In the case of a 6-conductor wire, of which only 4 are used (excitation + and -, signal + and -), connect the sense + and -wires to the respective polarities of the excitation wires.

A maximum of eight 350- ohm load cells can be connected to the instrument in parallel. The load cell excitation voltage is 5 Vdc and is protected against a temporary short circuit.

6 Wire:

PIN NO	DESCRIPTION	CABLE CONNECTION
1	+ SUPPLY	+ SUPPLY
2	+ SENSE	+ SENSE
3	+ SIGNAL	+ SIGNAL
4	- SIGNAL	- SIGNAL
5	- SENSE	- SENSE
6	- SUPPLY	- SUPPLY
SHLD	BODY	BODY

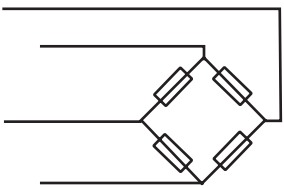
SIGNAL -
SUPPLY +
SENSE +
SIGNAL +
SENSE -
SUPPLY -



4 Wire:

PIN NO	DESCRIPTION	CABLE CONNECTION
1	+ SUPPLY	+ SUPPLY /
2	+ SENSE	+ SENSE
3	+ SIGNAL	+ SIGNAL
4	- SIGNAL	- SIGNAL
5	- SENSE	- SENSE/
6	- SUPPLY	- SUPPLY
SHLD	BODY	BODY

SIGNAL -
SUPPLY +
SENSE +
SUPPLY -

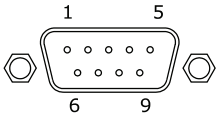


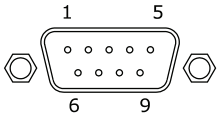
11.2. Serial Connections:

In order to create the serial connection use a shielded cable, making sure that only one of the two shield ends is grounded. If the cable has more conductors than those used, connect the free conductors to the shield.

The serial connection wire must be a maximum of 15 metres long (EIA RS-232-C standards), in addition to which it is necessary to adopt the RS422 interface th at the instrument can be equipped with.

The cable must not be channelled with other cables (i.e. outputs connected to remote switches or power supply wires), but must follow its own route. The PC used for the connection must conform to the EN 60950 standard.





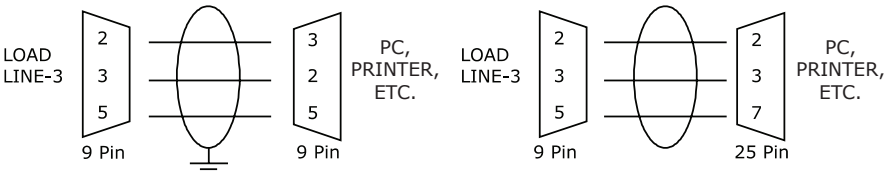
Com 1:

PIN NO	DESCRIPTION
2	RXD
3	TXD
5	GND
SHLD	BODY

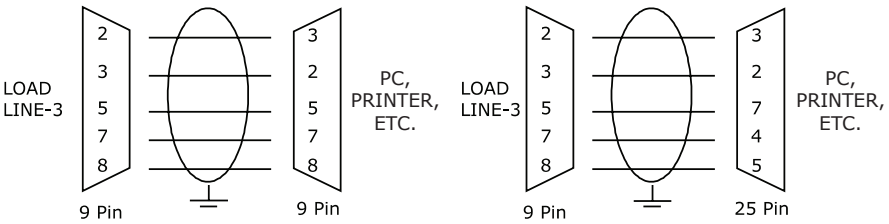
Com 2 (Optional)

PIN NO	DESCRIPTION
2	RXD
3	TXD
5	GND
7	RTS
8	CTS
SHLD	BODY

COM1:



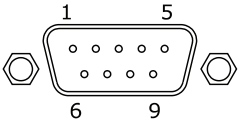
COM2:



11.3. RS485 Serial Connection:

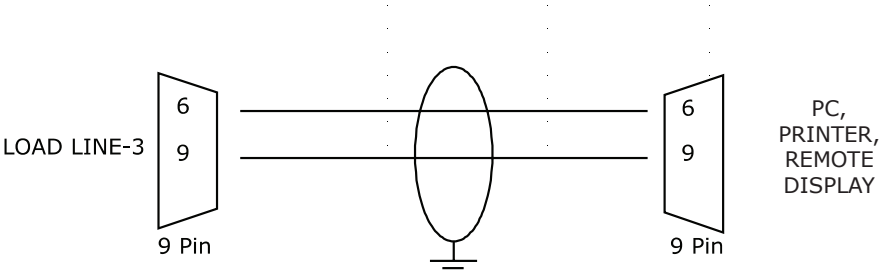
The serial connection cable must be suitable for Rs485 serial communications, with two twisted pairs and relative protective shielding. The cable must not be channelled with other cables (i.e. outputs connected to remote switches or power supply wires), but must follow its own route.

The PC used for the connection must conform to the EN 60950 standard.

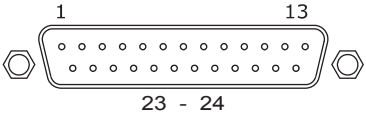


Com 2 (Optional)

PIN NO	DESCRIPTION
6	RS485 A
9	RS485 B
SHLD	BODY

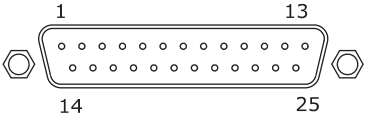


11.4. DAC (Optional):



PIN NO	DESCRIPTION
23	ANALOG OUTPUT
24	A GND
SHLD	BODY

11.5. Inputs / Outputs:



PIN NO	DESCRIPTION	PIN NO	DESCRIPTION
1	OUT 1A	14	OVDC
2	COM	15	INPUT 1C
3	OUT 1B	16	INPUT 1D
4	OUT 2A	17	INPUT 2C
5	COM	18	INPUT 2D
6	OUT 2B	19	INPUT 3C
7	OUT 3A	20	INPUT 3D
8	COM	21	INPUT 4C
9	OUT 3B	22	INPUT 4D
10	OUT 4A	23	-
11	COM	24	-
12	OUT 4B	25	-
13	+12VDC	SHLD	BODY

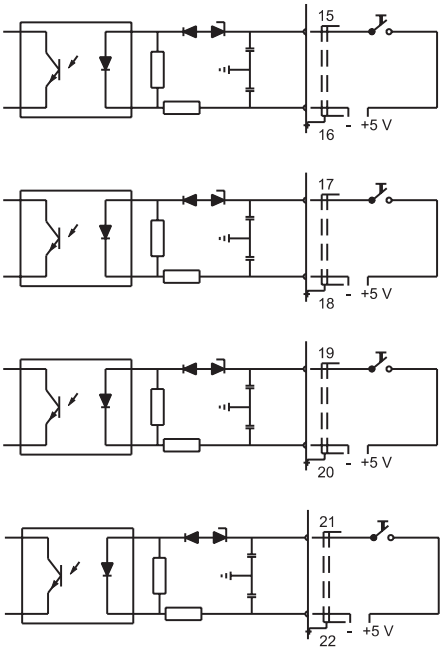
Inputs:

The logic inputs are electrically isolated from the instrument through opto-isolators.

- Use the shortest possible connection wire

The inputs are active when a voltage of 5 Vdc is applied (PNP logic).

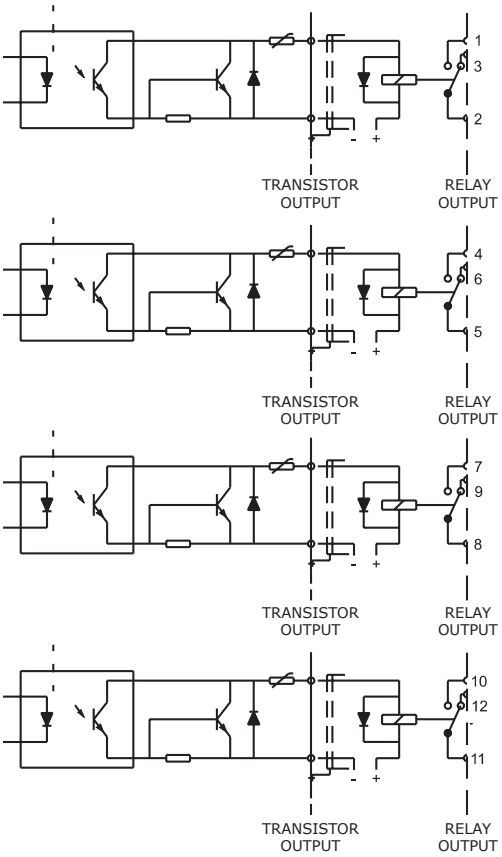
In order to activate a logic input, it is necessary to close the relative terminal supplied by external power.



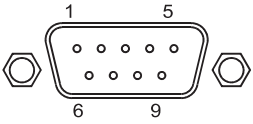
Outputs:

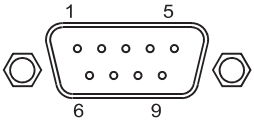
The logic outputs are electrically isolated from the instrument through opto - isolators.

The logic outputs are provided on a 4 relays, the rate of each contact is 1A/24Vdc or 0.5A/125 Vac. Each output is free programmable.



11.6. MODBUS RTU





COM 1 / MODBUS

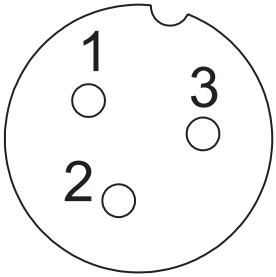
PIN	DESCRIPTION
2	RXD
3	TXD
5	GND
SHLD	BODY

COM 2 / MODBUS

PIN	DESCRIPTION
2	RXD
3	TXD
5	GND
6	RS 485A
7	RTS
8	CTS
9	RS 485B
SHLD	BODY

Note: Any of serial communication interface can be used by selecting from P5.7. parameter

11.7. Power Supply



PIN NO	DESCRIPTION
1	+12VDC
2	0 VDC

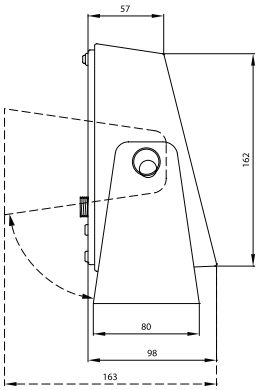
The power supply wire must be grounded and must be channelled separately from other supply wires with different voltages, from the load cell wires and the logic input/output wires.

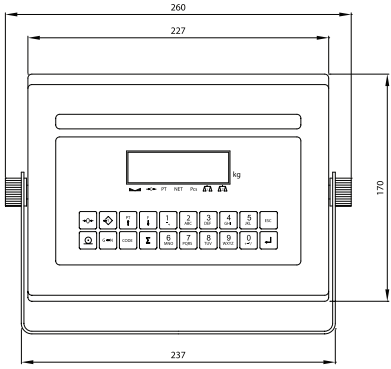
Supply voltage: 12VDC ~ 50/60 Hz

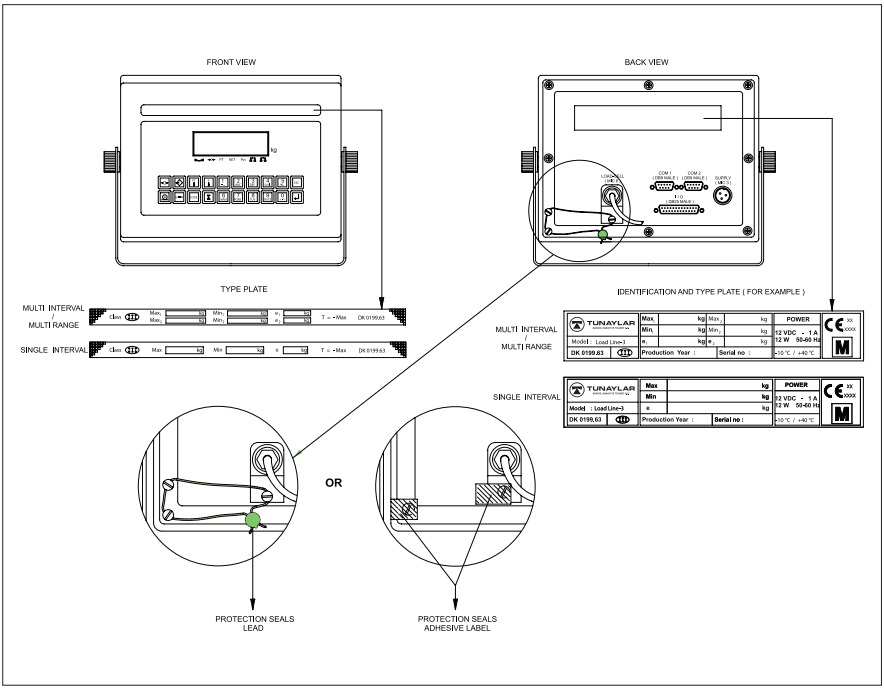
The instrument is grounded for practical reasons, therefore check the presence of valid ground protection.

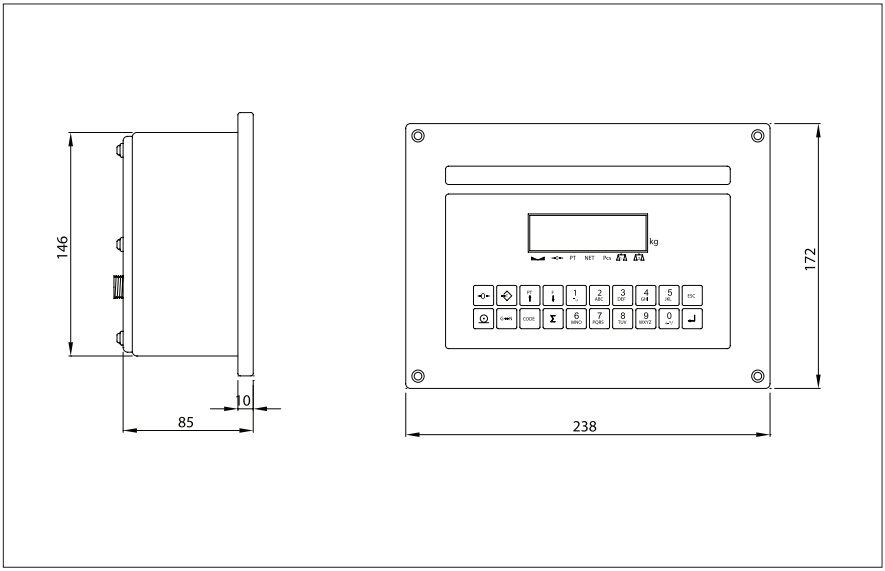
12. DRAWINGS & SEALING PLANS

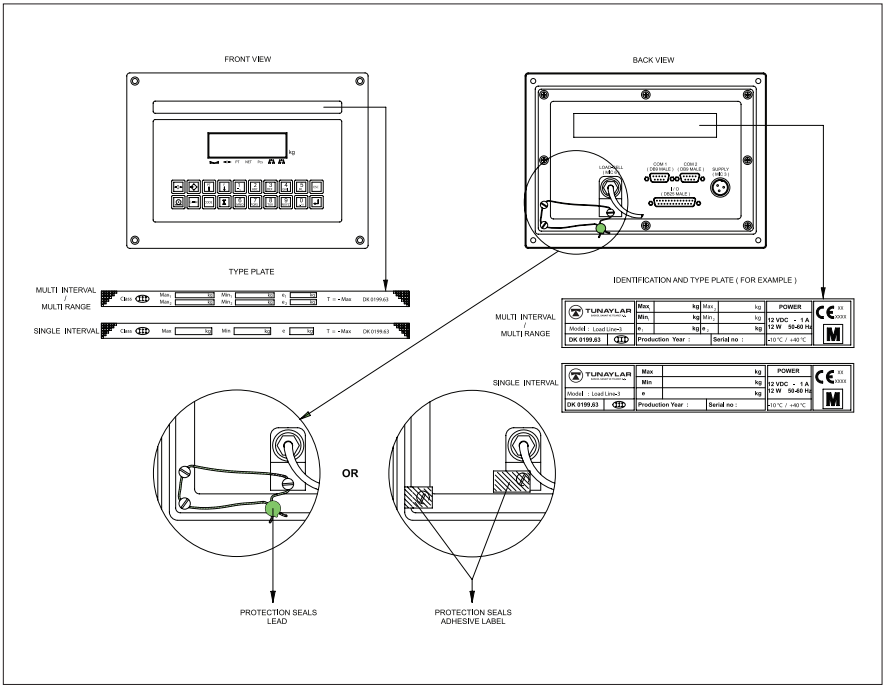
TYPE CTA

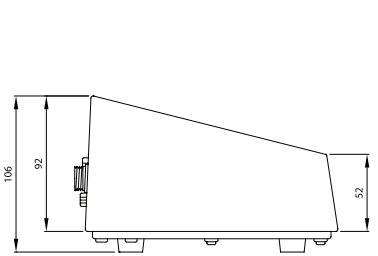


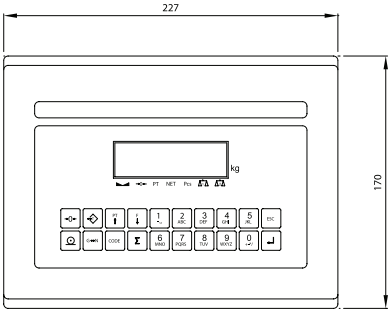


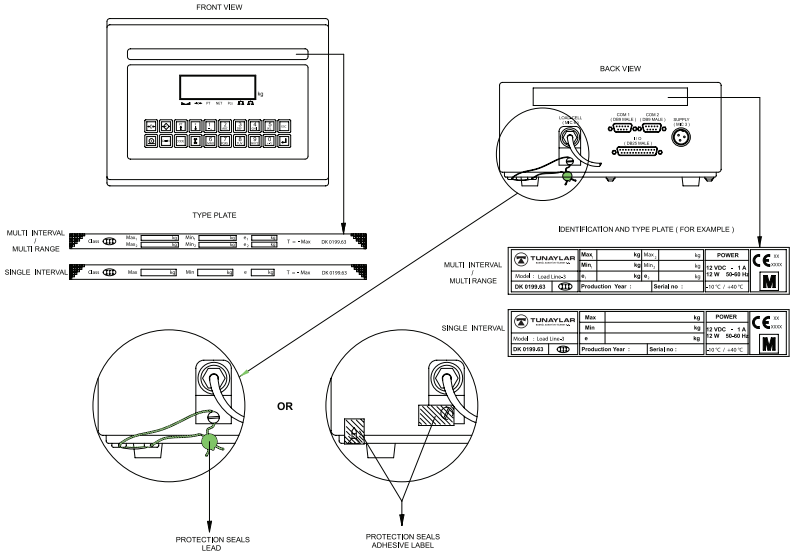


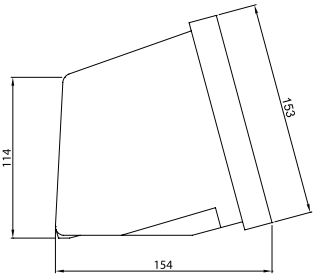

146
85
10
172
238
kg

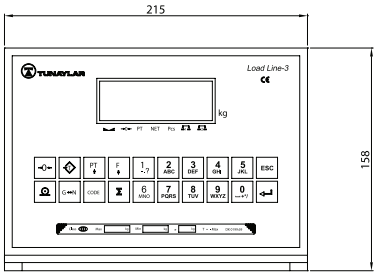

FRONT VIEW
BACK VIEW
TYPE PLATE
MULTI INTERVAL
MULTI RANGE
SINGLE INTERVAL
IDENTIFICATION AND TYPE PLATE (FOR EXAMPLE)
TUNAYLAR
POWER
12 VDC - 1 A
12 W 50-60 Hz
OK 0199.03
Production Year :
Serial no :
OR
PROTECTION SEALS
LEAD
PROTECTION SEALS
ADHESIVE LABEL

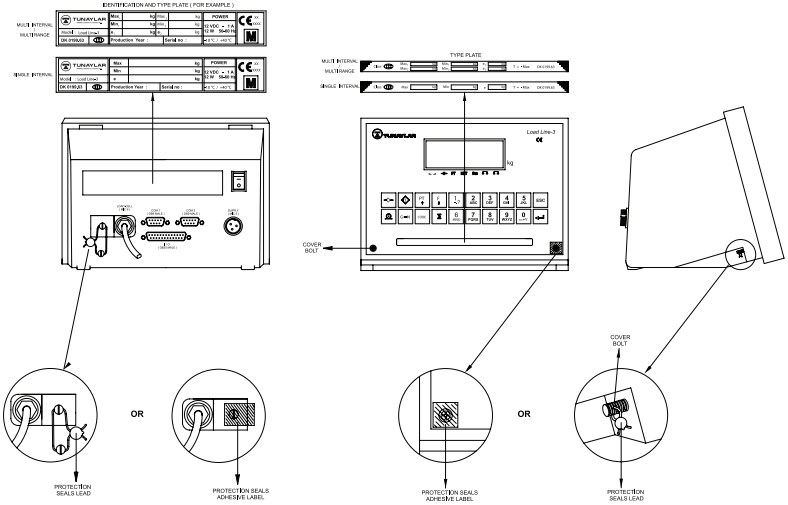

106
92
52


227
170
kg
PT NET Pcs


FRONT VIEW
BACK VIEW
TYPE PLATE
MULTI INTERVAL
MULTI RANGE
SINGLE INTERVAL
IDENTIFICATION AND TYPE PLATE (FOR EXAMPLE)
MULTI INTERVAL / MULTI RANGE
SINGLE INTERVAL
TUNAYLAR
DK 0199.03
OR
PROTECTION SEALS LEAD
PROTECTION SEALS ADHESIVE LABEL


153
114
154


215
158
Load Line-3
kg

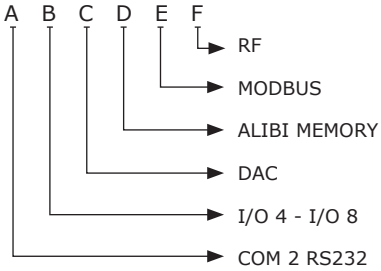

IDENTIFICATION AND TYPE PLATE (FOR EXAMPLE)
MULTI INTERVAL
MULTIRANGE
SINGLE INTERVAL
TYPE PLATE
COVER BOLT
OR
PROTECTION SEALS LEAD
PROTECTION SEALS ADHESIVE LABEL

13. . PART LIST

CODE	PART NAME
TN-LL3MA	MAINBOARD
TN-LL3AN	ANALOG CARD
TN-LL3MB	KEYPAD
TN-LL3DI	DISPLAY
TN-LL3IO	LOGICAL INPUT / OUTPUT CARD
TN-LL3SP	SERIAL PORT CARD
TN-LL3AB	SERIAL PORT CARD
TN-LL3LG6	MIC 6 LOAD CELL INPUT CONNECTOR
TN-LL3LC	LOAD CELL FILTER CARD
TN-LL3AD12V	ADAPTOR 12V DC
TN-LL3BG3-F	MIC 3 POWER SUPPLY INPUT CONNECTOR - FEMALE
TN-LL3BG3-M	MIC 3 POWER SUPPLY INPUT CONNECTOR MALE

14. LL3 MODEL OPTIONS CODE STRUCTURE

LOAD LINE 3 CTA
CTC
POA
TOA



B: if 0 then no exist
if 1 then I/O 4
if 2 then I/O 8

Others: if 0 then no exist
if 1 then exist

Exampe:

LOAD LINE 3 CTA 011100

Left to right:
0: Com2 non exist,
1: I/O 4 exist,
1: DAC exist,
1: Alibi Memory exist,
0: Modbus no exist,
0: RF no exist.

TUNAYLAR

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Akçaburgaz Mah. 88. Sok. No:7 Esenyurt - İSTANBUL / TÜRKİYE
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